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Abstract

Cooling device for an electric machine

A cooling device for an electric machine with thermal zones having interactions with one another is proposed, each of the thermal zones containing a heat source and a temperature sensor, and at least one cooling means, a controlling element connected to the temperature sensor being allocated to each thermal zone for activation of the at least one cooling means. The cooling device is characterized by the fact that outputs of a plurality of controlling elements can be connected to the at least one cooling means.

In an inventive cooling device, a plurality of controlling elements can act on one or more cooling means, whereby cooling means are supported or completely replaced by other existing cooling means.

Fig. 4

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New claims

- 1. A cooling device for an electric machine with
- thermal zones that have interactions with one another, each of the thermal zones containing a heat source and a temperature sensor, and
- at least two cooling means,
- a controlling element connected to the temperature sensor being allocated to each thermal zone for activation of the at least two cooling means and
- outputs of a plurality of controlling elements being connectable to the at least two cooling means, characterized in that an allocation matrix by which the controlling elements can be connected to the at least two cooling means is connected between a plurality of controlling elements and the at least two cooling means.
- 2. A cooling device according to claim 1, characterized in that a maximum-value generator for recognition of critical conditions is connected between a plurality of controlling elements and the at least one cooling means.
- 3. A cooling device according to claim 1 or 2, characterized in that the electric machine is a computer system and the cooling means are fans.
- 4. A cooling device according to one of claims 1 to 3, characterized in that the controlling elements are implemented with an ASIC and/or microcontroller chip or are implemented as part thereof.

AMENDED SHEET